AMCOM Update

DAU-South Acquisition Conference

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Agenda

- **Support to the Aviation Warfighter**
- **Aviation Field Maintenance Transformation**
- **Reset**
- **Condition Based Maintenance (CBM)**

AMCOM Support to the Warfighter

Army Fleet in OIF

2,456,568 Total Hours: 01 Feb 03 – 15 Jan 09

Army Fleet in OEF

389,768 Total Hours: 01 Feb 03 – 15 Jan 09

Support To The Warfighter

- ✓ ~ 3000 Aircraft Preset/Reset
- ✓ Aviation Field Maintenance
- ✓ Condition Based Maintenance
- ✓ Supply Support
- ✓ Provisioning
- ✓ Worldwide Onsite Technical Assistance (LARs / CFSRs)
- ✓ Fwd Deployed Repair/ Sustainment Activities: TAMP, TASM
- ✓ TMDE Calibration and Repair
- ✓ MWO Applications
- ✓ Depot Maintenance
- ✓ Technical Publications
- ✓ Airworthiness & Safety of Use

OEF Plus Up

- **Support to the Warfighter**
- **Aviation Field Maintenance Transformation**
- **Reset**
- **Condition Based Maintenance (CBM)**

Aviation Field Maintenance Transformation

- **What We Did?**
  - **Realigned All AMCOM Aviation Field Maintenance Responsibilities Into One Organization**
  - **Established Aviation Field Maintenance Directorate (AFMD)**
- **Why We Did This?**
  - **Fragmented Aviation Maintenance Responsibilities Highlighted in Recent Aviation Maintenance Issues**
  - **Mission Explosion for OLRs (Beyond MWO Application) Required Readjustment of Management Stru**

Need to Go Back to the Basics With Aviation Field Maintenance

Aviation Maintenance Hierarchy

Commander's Intent:
"Establish Unity of Command for AMCOM Below Depot Aviation Maintenance Activities"

AMCOM Managed
- Organic
- Contracted

Depot
- Airframe
- Component
- Special Projects

Multiple Managers
- AMCOM
- NGB
- DOL/ALMD

Below Depot / Above Unit
- Unit Overflow
- Limited Depot Repair
- MWO Application
- Reset

Unit Managed
- Organic Military
- CFT Augmentation

User
- AVUM
- AVIM
- Scheduled Services & Inspections
- Authorized Repairs

- Consolidate AMCOM Structure
- Standardize Processes and Business Rules
- Common Metrics & Oversight

Transform How The Army Operates

SINGLE ARMY AVIATION MAINTENANCE MANAGER

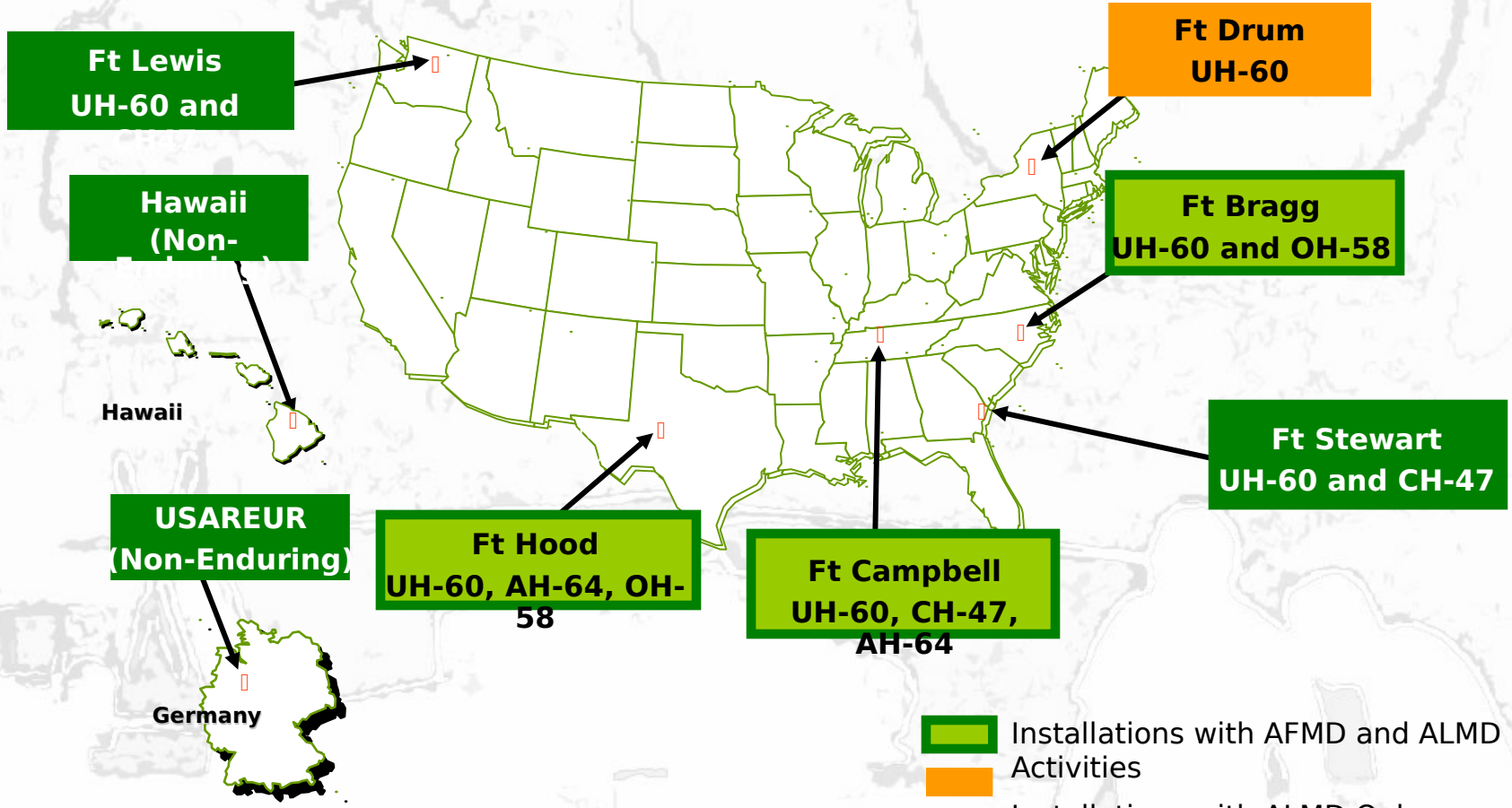
- **Support to the Warfighter**
- **Aviation Field Maintenance Transformation**
- **Reset**
- **Condition Based Maintenance (CBM)**

The Reset Process

- **Reset Is NOT:**
  - **Routine Scheduled Maintenance**
  - **Depot Overhaul**
- **Reset IS:**
  - **100% Disassembly of the Aircraft and Dynamic Components (Engines, Rotor Systems, Drive Trains, Flight Control Systems)**
  - **100% Cleaning of All Airframe and Component Elements**
  - **100% Serviceability Inspection of All Airframe and Component Elements**
  - **Application of DA Directed Modifications**
  - **100% Review and Correction of Historical Records**
  - **Refurbishment and Replacement of All Components to Serviceability Standards**
  - **Correction of Outstanding Deferred Maintenance Actions**

Returns An Immediately Deployable Aircraft To The Unit With Significantly Improved Operational Availability And Safety Characteristics

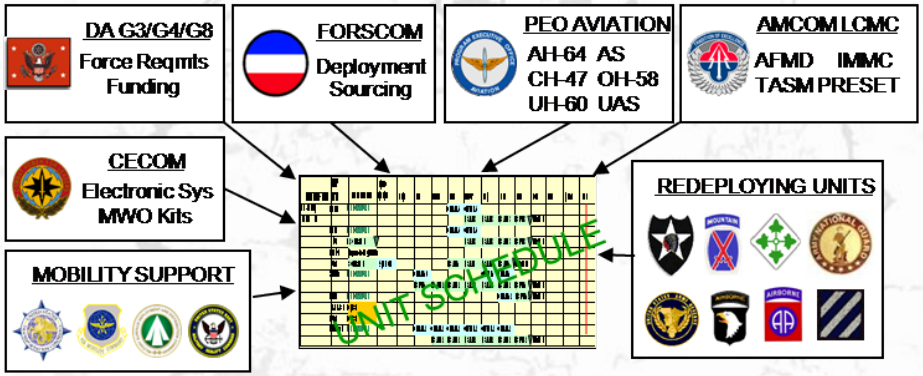
Reset Sites AFMD/ALMD*



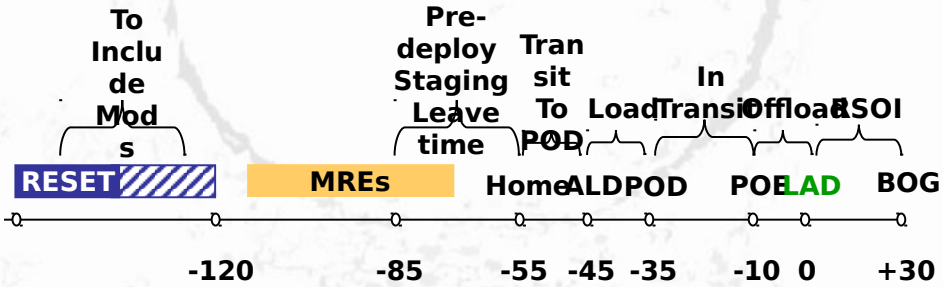
* *Aviation Field Maintenance Directorate / Aviation Logistics Management Division*

Aviation Reset Status

Various Stakeholders



Deployment Critical Timeline



Reset Summary Status

- **Completed 2,906 Aircraft (Includes SOA – 353 A/C)**
  - **OIF1 – 923 (Includes 75 SOA)**
  - **OIF2 – 426 (Includes 62 SOA)**
  - **OIF 04-06 – 561 (Includes 53 SOA)**
  - **OIF 05-07 – 446 (Includes 74 SOA)**
  - **OIF 06-08 – 452 (Includes 73 SOA)**
  - **OIF 07-09 – 98 (Includes 16 SOA)**
- **Aircraft In Reset Or Scheduled For Induction**
  - **OIF 06-08 – 10 In Reset; 0 Scheduled**
  - **OIF 07-09 – 112 In Reset; 228 Scheduled**

- **Support to the Warfighter**
- **Aviation Field Maintenance Transformation**
- **Reset**
- **Condition Based Maintenance (CBM)**

Condition Based Maintenance (CBM)

- Reactive Maintenance
- Time Based Inspection/Overhaul

- Digital Source Collector Installation
- Knowledge Development
- Fault Diagnosis
- Remaining Useful Life Calculation
- Inspection Targeting

- Proactive Maintenance
- 'On Condition' Inspection/Overhaul

CBM Program Objectives:

- Decrease Maintenance Burden on the Soldier
- Increase Platform Availability and Readiness
- Enhance Safety
- Reduce Op[illegible]

Key CBM Enablers

- Digital Source Collectors
- Flight Line Diagnostics
- Data Fusion/Analysis

Monitored Master Parts List – UH-60A/L (56 Parts)

Currently Monitored by Vibration
Structural Part, Possible Addition for Monitoring

Digital Source Collector Fieldings

Through Jan 09

Aircraft Type	Total # of Aircraft	DSC Equipped		Percent Complete
AH-64A	690	0	333	*48%*
AH-64D		333		
CH-47D	513	61	71	*14%*
CH-47F		0		
MH-47E/G		10		
UH-60A	1732	105	364	*21%*
UH-60L		180		
UH-60M		79		
MH-60K/L		0		
MH-6	51		16	*31%*
OH-58D	339		9	
TOTAL	*3325*	*793*		*24%*

CBM Demonstrated Benefits

- **Increased Readiness**

Impact of Equipping Deployed UH-60s Battalions With DSCs		
03-04 OIF Rotation (30 Aircraft)	**Non-equipped (Bn 1)**	**Non-equipped (Bn 2)**
FMC*	**65%**	**77%**
Total Flt Hours	**10,331**	**11,844**
OPTEMPO (Hours/Year/Aircraft)	**334**	**395**
Both Units Completed Reset		
05-06 OIF Rotation (30 Aircraft)	**DSC Equipped (Bn 1)**	**Non-equipped (Bn 2)**
FMC	**87%**	**82%**
Total Flt Hours	**21,819**	**20,388**
OPTEMPO (Hours/Year/Aircraft)	**727**	**680**

CBM Will Enhance Pilot Training by Providing Insight Not Previously Available (e.g., Fatigue Damage Due to Maneuver Severity)

Expect Increased Readiness in Deployed. Real Comparison Is Deployed CBM vs Non-CBM Deployed Aircraft

- **Decreased Mission Aborts**

4-101 Avn Flew 26,000 Hours on 38 UH-60 Du
12 Month OIF Deployment With 87% FMC

- **57 Hrs/Acft/Month = 3.8 Times Peacetime OPTEMPO**
- **7,260 Launches With No Missions Dropped for Maintenance**
- **3,417 Hours in Highest Month (~110 Hours/Day With 20-25 Aircraft)**

CBM Already Changing the Way Aviation Operations Are Planned & Conducted

CBM = Increased Warfighting Capability

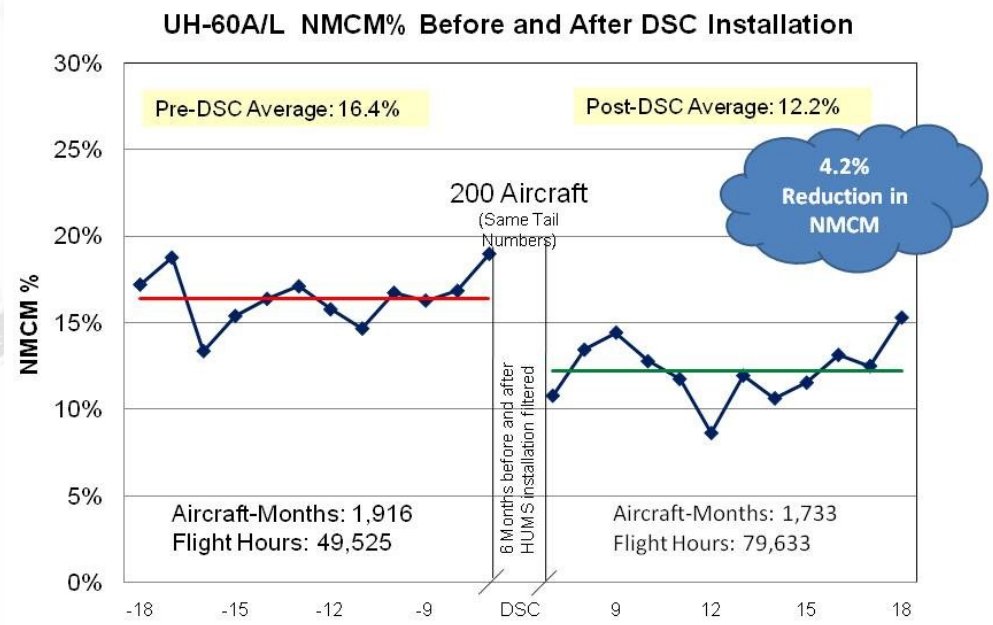
CBM Benefits to Army Aviation

Increased Readiness/Reduced O&S Costs/Reduced Soldier Burden

Impact of Equipping Aircraft With DSCs

2007/2008	AH-64	UH-60	CH-47
# of Aircraft	319	319	71
MMH Avoided	16,369	7,274	2,957
Hrs Reduction in MTF hours	2,005	722	166

Reduced NMC Due to Maintenance



Cost Savings/Avoidance

$24M: 51 T700 Engines not Replaced on UH-60/AH-64 for Overspeed/Overtorque

~$30M: Additional AH-64/UH-60 Flight Hours Available Due to Increased Readiness/Availability + MTF Hours Saved

~$49M: Three Class A Accidents Avoided

~$6.6M: Components not Replaced, Returned to Service, and Overhaul Savings Due to Early Failure Detection

~ $2.8M: AH-64 Tail Gearbox Scheduled Maintenance

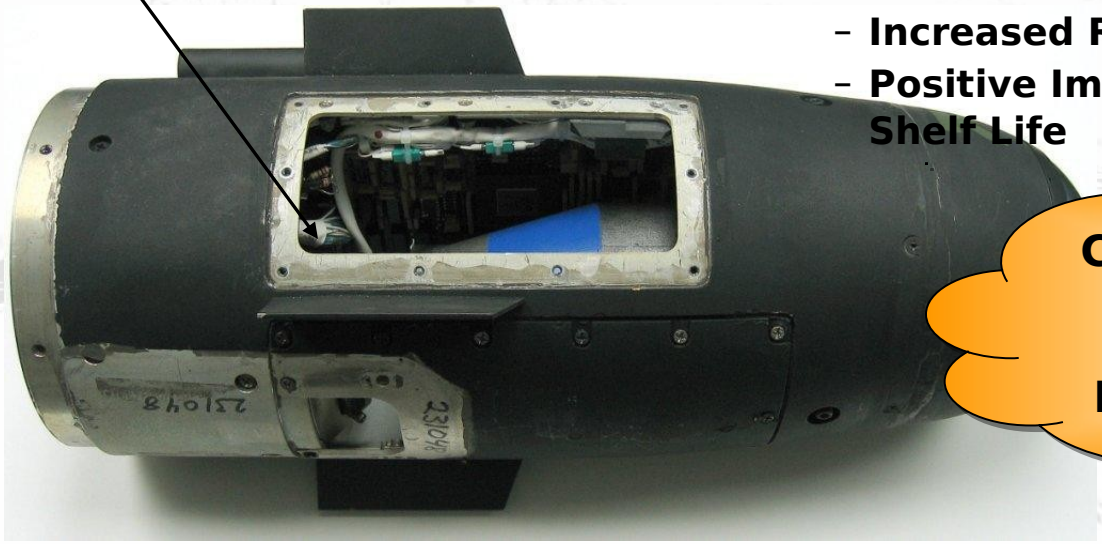
~$112.4M

Cost Savings/Avoidance of ~$112M (26 Month Period) Due to CBM

(Accidents Avoided, Components Not Replaced Unnecessarily, MTF Hours Saved, ...)

HELLFIRE
Captive Carry Health Monitor

CCHM



Hellfire II (AGM-114K) Guidance Section

- **Methodology – Automatically Measure and Record**
  - **Captive Carry Hours / Number of Cycles**
  - **Temperature Exposure**
  - **Battery Life**
  - **Data Histogram**
  - **Drop Shock/Humidity**
- **Payoff**
  - **Reduced Maintenance Burden**
  - **Increased Reliability and Enhanced Safety**
  - **Positive Impact to Stockpile Readiness and Shelf Life**

Captive Carry Exposure Data Will Optimize Reset Maintenance, Improve Reliability, and Reduce Reset Costs

Challenges

- **Reset**
  - **Funding**
  - **ARFORGEN Synchronization**
- **Increased OEF Support**
- **OIF Retrograde**

Our Customers

We Are Here…

BECAUSE THEY ARE THERE !!!